# Beaver County Employes' Retirement System

Report on 2009 Actuarial Valuation Including Determination of County Annual Required Contribution for 2009

**HayGroup**°



# Prepared By:

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for

# **Beaver County Employes' Retirement Board**

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**April 7, 2009** 

**CONFIDENTIAL** 

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# I. Introduction

The primary purpose of this report is to investigate and fully and fairly disclose the actuarial position of the System as of January 1, 2009 and to establish the proper appropriation for the 2009 plan year, in accordance with the funding standards of Section 6 of Act 96, 1971 of the Commonwealth of Pennsylvania as amended.

On the basis of the actuarial methods, assumptions and major plan provisions summarized in this report and in reliance on the member data and statement of the Fund's assets furnished by the County, to the best of our knowledge the information in this report is complete and accurate.

In our opinion, this report presents fairly the financial and actuarial position for the Beaver County Employes' Retirement Plan as of January 1, 2009 in accordance with generally accepted actuarial principles, and on the basis of actuarial assumptions and methods which, in the aggregate, are reasonable (taking into account past experience under the System and reasonable expectations) and which in combination represent our best estimate of anticipated experience.

Respectfully submitted,

HayGroup

By:

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# II. Findings

Certified Annual Required Contribution (ARC)

Please note that the certified Annual Required Contribution which is reported on page 11 of this report and which must be funded in 2009 is \$5,763,864.00 This is required to be made by the County from the General Fund.

**Actuarial Adjustments** 

Also note that the balances in the Reserve Accounts on page 10 reflect the following transfers which are necessary to keep the balance in the Retired Member's Reserve Account equal to the liability for the retired lives and to reflect the difference between the amount of interest credited to the respective reserves and the interest rate assumed in the valuation of the liabilities. Please make these transfers in your records:

	DEBIT	CREDIT
County Annuity Reserve Account	\$ 1,144,906.14	
Retired Members Annuity Reserve Account		\$ 1,144,906.1 4

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# III. Schedules

# Schedule A

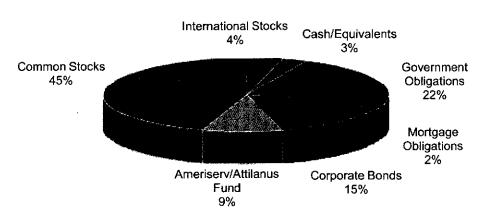
Disclosure of Pension Information in Accordance with Statement No. 25, Statement No. 27 and Statement No. 50 of the Governmental Accounting Standards Board

BEAVER COUNTY EMPLOYES' RETIREMENT SYSTEM							
· ·	STATEMENT OF CHANGES IN PLAN NET ASSETS FOR THE YEAR ENDED DECEMBER 31, 2008 AND 2007						
A	ddition	าร					
		2008 Total		<b>2007 Total</b>			
Contributions				0.440.444.00			
County	\$	1,887,756.00		2,113,111.00			
Plan Members	\$	5,057,430.86		4,673,008.68			
Miscellaneous	\$ <u></u>	0.00	*	108,285.88			
Total Contributions	\$	6,945,186.86	\$	6,894,405.56			
Investment Income							
Realized Loss \$ (9,636,007.46	)						
Unrealized Loss \$ (35,308,466.48							
Net Loss in Fair Value	<b>^</b> \$	(44,944,473.94)	\$	3,620,440.97			
Interest		3,185,868.34	\$	3,240,941.13			
Dividends	\$ \$	2,139,788.10	\$	2,132,532.95			
Net Accrued Interest	\$	1,693,786.68	\$	0.00			
Investment Income	\$ <u></u>	(37,925,030.82)	\$	8,993,915.05			
Less Investment Expense	\$	676,299.07	\$	752,451.78			
Net Investment Income	\$ \$	(38,601,329.89)	-	8,241,463.27			
Total Additions	\$	(31,656,143.03)	\$	15,135,868.83			
De	ductio	ns					
Benefits	\$	6,202,485.00	\$	6,085,488.94			
Refunds of Member Contributions	\$ \$ \$	1,082,590.60		1,012,478.01			
Administrative Expense	\$	39,357.25		43,636.00			
Miscellaneous	š	0.00		26,733.97			
Total Deductions	\$	7,324,432.85	\$	7,168,336.92			
Net Increase/(Decrease)	\$	(38,980,575.88)	\$	7,967,531.91			
Net Assets Held In	Trust F	or Pension Benefits					
Paginning of Voor	•	180 225 070 25	\$	181,258,447.44			
Beginning of Year End of Year	\$ — \$	189,225,979.35 150,245,403.47	\$ —	189,225,979.35			
	T ===	22, 100, 100	·				

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ES' RET	IREMENT SYSTEM		
S AS OF	DECEMBER 31, 20	08 AN	D 2007
Assets			
	2008 Total		2007 Total
\$	3,347,608.35	\$	3,512,227.06
\$	1,335,443.00	\$	1,614,099.00
\$	33,054,952.03	\$	42,839,824.25
\$	22,052,472.52	\$	23,811,675.92
\$	67,900,411.61	\$	91,287,604.15
\$	5,604,501.82	\$	10,849,935.13
\$	13,353,539.41	\$	15,310,613.84
\$	3,597,474.73	\$	0.00
\$ _	145,562,352.12	\$ _	184,099,653.29
\$_	150,245,403.47	\$	189,225,979.35
iabilitie	<u>s</u>		
\$_	0.00	. \$	0.00
Trust Fo	or Pension Benefits	i	
\$_	150,245,403.47	\$	189,225,979.35
	S AS OF Assets  \$ \$ \$ \$ \$ \$ Iabilities	Assets    2008 Total   3,347,608.35   1,335,443.00	2008 Total   3,347,608.35   \$   1,335,443.00   \$

# **TOTAL ASSETS (MARKET VALUE 12-31-2008)**



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Beaver County Employes' Retirement System

Notes to the Financial Statements for the Fiscal Year Ended December 31, 2008

**Summary of Significant Accounting Policies** 

Basis of Accounting: The Beaver County Employes' Retirement System financial statements are prepared using the accrual basis of accounting. Plan member contributions are recognized in the period in which the contributions are due. Employer contributions to each plan are recognized when due and the employer has made a formal commitment to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of each plan.

Method Used to Value Investments: Investments are reported at fair value. Short-term investments are reported at cost, which approximates fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Investments that do not have an established market are reported at estimated fair value.

# Plan Descriptions and Contribution Information

Membership of the plan consisted of the following at December 31, 2008, the date of the latest actuarial valuation:

Retirees and Beneficiaries Receiving Benefits	613
Terminated Plan Members Entitled to but not yet Receiving Benefits	58
Active Plan Members	1,443
Total	2,114
Number of Participating Employers	1

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### Beaver County Employes' Pension System

Plan Description: The Beaver County Employes' Pension Plan is a single-employer defined benefit pension plan that covers all employees of the County. The plan provides retirement, disability, and death benefits to plan members and their beneficiaries. Cost-of-living adjustments (COLA) are provided at the discretion of the Beaver County Employes' Retirement Board. Act 96 of 1971, as amended cited as the County Pension Law provides for the creation, maintenance and operation of this plan.

Contributions: Plan members are required to contribute 9% of their annual covered salary. The County is required to contribute at an actuarially determined rate. Per Act 96 of 1971, as amended, contribution requirements of the plan members and the County are established and may be amended by the General Assembly of the Commonwealth of Pennsylvania. Administrative costs may be financed through investment earnings.

### REQUIRED SUPPLEMENTARY INFORMATION

#### SCHEDULES OF EMPLOYER CONTRIBUTIONS

Year	Annual Required Contribution			County Contribution		
2000	\$	0	\$	0		
2001	\$	0	\$	0		
2002	\$	1,451,894	\$	1,451,894		
2003	\$	3,325,708	\$	3,325,708		
2004	\$	3,652,159	\$	3,652,159		
2005	\$	3,737,244	\$	15,282,136		
2006	\$	2,020,537	\$	2,020,537		
2007	\$	2,113,111	\$	2,113,111		
2008	\$	1,887,756	\$	1,887,756		
2009	\$	5,763,864	\$			

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		REQUIRED	SUPPLEMENTA	RY INFORMATION	ON			
SCHEDULES OF FUNDING PROGRESS								
Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) - Entry Age (b)*	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)		
1/1/2008	195,369,098	191,872,922	(3,496,176)	101.8%	53,935,875	(6.5)%		
1/1/2009	179,461,719	208,134,895	28,673,176	86.2%	56,786,835	50.5%		

<sup>\*</sup> The ARC is calculated using the aggregate actuarial cost method. Information in this schedule is calculated using the entry age actuarial cost method as a surrogate for the funding progress of the plan.



#### NOTES TO THE REQUIRED SCHEDULES

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation Date 12/31/2008 Actuarial Cost Method Aggregate \*\*

Asset Valuation Method 5-Year Smoothed Market

**Actuarial Assumptions:** 

Investment Rate of Return \* 7.5%
Projected Salary Increases \* 4.5%

Includes Inflation at 3%

\*\* The <u>aggregate actuarial cost method</u> is used to determine the annual required contribution (ARC) for the plan. Because this method does not identify or separately amortize unfunded actuarial liabilities, information about funded status is prepared using the entry age actuarial cost method and is intended to serve as a surrogate for the funded status of the plan.

(1) Year	(2) ARC	(3) Interest On NPO ***	(4) ARC Adjustment **	(5) Pension Cost (2+3-4)	(6) Contribution	(7) Change in NPO (5-6)	(8) NPO Balance * (BB+7)
2000	0	0	0	0	0	0	0
2001	Ö	Ö	ō	0	Ö	ŏ	Ö
2002	<b>1</b> ,451,894	0	0	1,451,894	1,451,894	Ö	Ō
2003	3,325,708	0	0	3,325,708	3,325,708	0	0
2004	3,652,159	0	0	3,652,159	3,652,159	0	0
2005	3,737,244	0	0	3,737,244	15,282,136	(11,544,892)	(11,544,892)
2006	2,020,537	(865,867)	(1,342,218)	2,496,888	2,020,537	476,351	(11,068,541
2007	2,113,111	(830,141)	(1,296,750)	2,579,720	2,113,111	466,609	(10,601,932
2008	1,887,756	(795,145)	(1,258,323)	2,350,934	1,887,756	463,178	(10,138,754
2009	5,763,864	(760,407)	(1,212,862)	6,216,319		,	, , , , , , , , , , , , , , , , , , , ,

<sup>\*</sup> BB = Beginning balance for the year.

<sup>\*\*</sup> ARC Adjustment -Amortization factor based upon level percentage of projected payroll.

<sup>\*\*\*</sup> Interest on the balance of the NPO at the beginning of the year using the investment return rate assumed in determining ARC. The interest is an estimate of the investment earnings lost to the plan on any contributions that were not made (7½% when applicable).

## Schedule B

Schedule B shows the allocation of the assets among the Fund's reserve accounts (see Schedule F for Determination of Reserve Balances) and the Fund's liabilities as of January 1, 2009. The liabilities were determined from the actuarial valuation of the System based upon the data submitted by the County.

ASSETS	
Members' Annuity Reserve Account	\$ 64,901,129.82
County Annuity Reserve Account	\$ 50,636,137.01
Retired Members' Reserve Account	\$ 50,754,170.00
Unrealized Appreciation of Assets	\$ (16,046,033.36)
Total Assets, (Market Value) of the Beaver County Employes' Retirement Fund	\$ 150,244,303.47
LIABILITIES	
Actuarial Present Value of:	
Accumulated Plan Benefits	
Vested (1,034)	\$ 45,918,689.00
Nonvested (409)	\$ 866,717.00
Future Benefit Accruals	\$ 63,894,031.00
Terminated Vested Benefits	\$ 2,251,796.00
Retired Benefits	\$ 50,754,170.00
Member Accumulated Deductions	\$ 64,901,129.82
Total Liabilities of the Beaver County Employes' Retirement Fund	\$ 228,586,532.82

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# Schedule C

Schedule C determines the certified Annual Required Contribution (ARC) of \$5,763,864.00 for 2009 for the Beaver County Employes' Retirement System.

a	Active Participants			\$	110,679,437.0
	Retirement Benefits	\$	96,530,142.00	•	
	Termination Benefits	\$	8,074,494.00		
1	Death Benefits	\$	6,074,801.00		
<b>b</b> .	Terminated Vested Participants			\$	2,251,796.0
c. I	Retired Members and Beneficiaries			\$	50,754,170.0
	Retirement Benefits	\$	49,420,199.00		
(	Cost-of-Living Benefits	\$	1,333,971.00		
d. I	Member Accumulated Deductions			\$	64,901,129.8
е.	Total (a) + (b) + (c) + (d)			\$	228,586,532.8
. Valu	ation Assets				
a. A	ctuarial Value of Plan Assets (see page	e 13)		\$	179,461,718.
	xcess of Actuarial Value of Assets over uture Benefits for Administrative and Cl			\$	950,834.
c. T	otal Assets (a) + (b)			\$	180,412,553.
. Pres	sent Value of Future County Normal (	Costs (1e	e) - (2c)	\$	48,173,979.
l. Pres	ent Value of Future Compensation o	f Active	Members	\$	474,701,917.
. Cou	nty Normal Cost Accrual Rate (3) / (4	)			10.15
6. Estii	mated 2009 Compensation Rate of M	embers		\$	56,786,835.
7. Cou	nty Normal Cost for 2009 (5) x (6)			\$	5,763,864.
(Ann	ual Required Contribution (ARC) for 20	09)			

#### Notes:

<sup>\*</sup>The equivalent normal cost accrual rate to be applied to actual 2008 salaries to determine reimbursable expenses is 10.61%.

#### Schedule D

The following are notes to Schedules B and C:

# Members' Annuity Reserve Account

The balance of \$64,901,129.82 in this account is the total of the contributions deducted from the salaries of the active and terminated vested members of the retirement system and the IRC 414(h)(2) pickup contributions together with the interest additions as of January 1, 2009. Since these accumulations represent the present value as of January 1, 2009, of future benefits, the reserve balance and liability are identical.

# County Annuity Reserve Account

The balance of \$50,636,137.01 in this account as of January 1, 2009 and the amounts expected to be credited in the future, plus investment earnings, represent the reserves set aside for the payment of the county's share of the retirement allowances.

This is the account out of which regular interest is credited to the member's annuity and retired members' reserve account, administrative expenses may be paid and the pension obligations of the County are funded.

When a County Annuity is scheduled to commence for a particular member, sufficient monies are transferred from the County Annuity Reserve Account to the Retired Members' Reserve Account to provide for such County Annuities actually entered upon.

# Retired Members' Reserve Account

This is the account out of which monthly retirement allowances including cost-of-living increases and death benefits are paid.

The assets allocated to this reserve account as of January 1, 2009 amount to \$50,754,170.00. The corresponding liability for those annuitants on the roll is identical.

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# Adjustment for Market Value Fluctuation

In order to reduce the fluctuations in the County normal cost which can result from full recognition of the unrealized appreciation or depreciation of the Fund's securities each year, the value of assets used to determine costs was determined by adjusting the cost value of the assets by the average ratio of market to cost value for the past five years:

January 1	(1) Cost Value of Assets	(2) Market Value of Assets	Ratio (2) / (1)
2005	\$ 124,581,283	\$ 143,395,611	1.1510
2006	\$ 147,859,810	\$ 159,620,686	1.0795
2007	\$ 157,824,323	\$ 181,258,447	1.1485
2008	\$ 169,963,546	\$ 189,225,979	1.1133
2009	\$ 166,291,437	\$ 150,245,403	0.9035
Average			1.0792

ACTUARIAL VALUE OF ASSETS JANUARY 1, 2009						
(1) Cost Value of Assets	\$	166,291,436.83				
(2) Average Ratio		1.0792				
(3) Actuarial Value of Assets (see line 2, page 11)	\$	179,461,718.63				

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# Schedule E

APPROXIMATE RATE OF RETURN FOR 2008 PLAN YEAR						
		Actuarial Value		Market Value		
1. Value as of December 31, 2007	\$	192,245,767.14	\$	189,225,979.35		
2. Contributions Received During Year	\$	6,945,186.86	\$	6,945,186.86		
3. Benefits and Expenses Paid During Year	\$	8,000,731.92	\$	8,000,731.92		
4. Value as of December 31, 2008	\$	179,461,718.63	\$	150,245,403.47		
5. Non-Investment Increment: (2) - (3)	\$	(1,055,545.06)	\$	(1,055,545.06)		
6. Investment Increment: (4) - (1) - (5)	\$	(11,728,503.45)	\$	(37,925,030.82)		
7. Time Weighted Value of Assets: (1) + .5(5)	\$	191,717,994.61	\$	188,698,206.82		
8. Approximate Rate of Return for 2008: (6) / (7)		(6.12)%		(20.10)%		

# **HISTORY OF RATE OF RETURNS**

	Actuarial Value	Market Value
Plan Year	Rate of Return	Rate of Return
2007	·· -	4.98 %
2006		13.77 %
2005		2.55 %
2004		7.08 %
2003		17.48 %
2002		(5.31) %
2001		(2.60) %
2000		(0.14) %
1999		8.16 %
Five Year Average:		.94 %
Ten Year Average:		2.06 %

**Schedule F**Determination of Reserve Balances

	M.A.R.A.	C.A.R.A	R.M.R.A.	TOTAL
Balance 1/1/2008	\$ 61,704,767.23	\$ 64,438,729.00	\$ 43,820,050.00	\$ 169,963,546.23
County Appropriations				
Member Contributions	5,057,430.86			
Member Purchases		1,887,756.00		
Net Investment Income		(2,616,564.34)		
Investment Expenses		(676,299.07)		
Member Contributions Refunded	(1,082,590.60)			
Pension Payments			(5,987,082.65 )	
Death Benefits			(215,402.35)	
Retiree and Death Benefit Transfers	(4,055,013.51)	(6,104,738.02)	10,159,751.53	
Cost of Living Funding Requirement				
Administrative Expenses		(39,357.25)		
Balance Before Interest	61,624,593.98	56,889,526.32	47,777,316.53	166,291,436.83
Interest Allocated in 2008	3,276,535.84	(5,108,483.17)	1,831,947.33	
Balance Before Actuarial Adjustments	64,901,129.82	51,781,043.15	49,609,263.86	166,291,436.83
Actuarial Adjustments		(1,144,906.14)	1,144,906.14	
Ending Balance 12/31/2008	64,901,129.82	50,636,137.01	50,754,170.00	166,291,436.83
Unrealized Appreciation				(16,046,033.36)
Total Assets (12/31/2008) (Market Value)				150,245,403.47

# Schedule G

# **Membership History**

Below is a ten-year history of the Retirement System's membership.

		MEMBERS AN	RETIRED ME	MBERS AND BE	NEFICIARIES	
January 1	Male	Female	Total	Male	Female	Total
2009	461	1,040	1,501	175	429	604*
2008	452	1,043	1,495	152	399	551
2007	452	1,021	1,473	148	376	524
2006	449	1,003	1,452	143	351	494
2005	449	1,007	1,456	137	315	452
2004	508	1,073	1,581	116	271	387
2003	515	1,067	1,582	109	254	363
2002	489	1,044	1,533	100	239	339
2001	466	1,037	1,503	95	223	318
2000	441	1,011	1,452	93	210	303

<sup>\*</sup> This total does not include 9 County retirees who are receiving monthly retirement payments from Hartford in addition to cost of living payments from Beaver County Employes' Retirement Fund.

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# Schedule H

Changes in Plan Participation From January 1, 2008 to January 1, 2009

ACTIVE PARTICIPANTS			
Number as of January 1, 2008		1,445	
Changes During Plan Year:			
Retired	( -)	57	
Terminated and Vested	(-)	9	
Terminated	(-)	79	
Died	(-)	0	
New Participants	(+)	143	
Number as of January 1, 2009		1,443	

RETIRED PARTICIPANTS					
Number as of January 1, 2008		551			
Changes During Plan Year:					
Returned to Active Service	( -)	0			
Died	(-)	10			
New Retirements from Active Service	(+)	57			
New Surviving Annuitants	(+)	5			
Vested Terminated Participants Whose Benefits Commenced	(+)	2			
Additions	(+)	1			
Deletions	(-)	2			
Number as of January 1, 2009		604			

TERMINATED VESTED PARTICIPANTS			
Number as of January 1, 2008		50	
Changes During Plan Year:			
Returned to Active Service	( -)	0	
Benefits Commenced	(-)	2	
Died	(-)	0	
New Termination's with Vesting	(+)	9	
Additions	(+)	1	
Number as of January 1, 2009		58	

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Schedule I

Age, Service and Average Salary Profile of the Active Members on January 1, 2009.

MALES FULL YEARS OF SERVICE TO JANUARY 1, 2009									
Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	Total	verage Salary
0-19	0	0	0	0	0	0	0	0	\$ 0
20-24	13	1	0	0	0	0	0	14	\$ 23,915
25-29	27	8	0	0	0	0	0	35	\$ 31,371
30-34	20	20	8	1	0	0	0	49	\$ 36,399
35-39	13	12	17	13	0	0	0	55	\$ 42,780
40-44	10	6	13	21	4	0	0	54	\$ 44,758
45-49	7	5	8	10	13	3	0	46	\$ 43,258
50-54	9	11	17	21	19	13	5	95	\$ 44,962
55-59	8	12	8	8	7	7	5	55	\$ 45,290
60-64	4	5	10	2	4	2	5	32	\$ 44,258
65 +	3	3	4	2	1	0	0	13	\$ 35,494
Total	114	83	85	78	48	25	15	448	\$ 41,554

Average Age:

45.20 12.16

Average Service:

Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	Total	•	Average Salary
0-19	1	0	0	0	0	0	0	1	\$	22,171
20-24	30	1	0	0	0	0	0	31	\$	25,665
25-29	38	23	2	0	0	0	0	63	\$	32,761
30-34	29	32	23	1	0	0	0	85	\$	36,343
35-39	28	21	32	10	2	0	0	93	\$	36,805
40-44	29	28	26	21	11	0	0	115	\$	40,010
45-49	45	19	30	23	21	8	5	151	\$	38,608
50-54	21	25	32	42	36	4	16	176	\$	40,596
55-59	19	30	37	39	28	13	8	174	\$	40,845
60-64	11	10	14	17	12	3	2	69	\$	39,308
65 +	5	5	10	7	9	1	0	37	\$	38,034
Total	256	194	206	160	119	29	31	995	\$	38,388

Average Age: Average Service:

46.56 11.67

## Schedule J

Actuarial Assumptions and Actuarial Cost Method for Funding Purposes, January 1, 2009.

**Actuarial Assumptions** 

Mortality Rates: The life expectancy of all members (active and retired) is determined in accordance with the mortality rates set forth in the 1983 Group Annuity Mortality Table.

Withdrawal Rates: Members not eligible to retire are assumed to terminate employment in accordance with a percentage of the withdrawal rates set forth in Table T-7 of the Actuary's Handbook. The applicable percentage depends on the member's years of service as follows:

YEARS OF SERVICE	PERCENTAGE
less than 1	300 %
1 but less than 2	275 %
2 but less than 3	250 %
3 but less than 4	225 %
4 but less than 5	200 %
5 but less than 6	<b>1</b> 75 %
6 or more	100 %

It is further assumed that a percentage of members who terminate after having met the Plan's five year vesting requirement will elect an immediate refund of their own contributions with interest thus forfeiting the County --provided pension. The applicable percentage is 100% for termination ages up to age 30. After age 30 the applicable percentage is determined as 100% less (age - 30) x 3 1/3%. Illustrative percentages are as follows:

AGE	PERCENTAGE
30 or less	100.0 %
35	83.3 %
40	66.7 %
45	50.0 %
50	33.3 %
55	16.7 %

The following tables set forth illustrative withdrawal rates as determined in accordance with the methodology described on the previous page.

# Probability of Withdrawing During Year:

-	LESS THAN FIVE YEARS OF SERVICE						
	Years of Service						
Age at Hire	0	1	2	3	4		
20	.2982	.2720	.2460	.2202	.1947		
30	.2791	.2532	.2275	.2021	.1770		
40	.2326	.2067	.1814	.1570	.1335		
50	.1267	.1013	.0781	.0577	.0407		
59	.0086	-	-	-	-		

FIVE OR MORE YEARS OF SERVICE					
Age at Beginning of Year	Probability of Withdrawing and Forfeiting County Pension	Probability of Withdrawing and Retaining County Pension			
30	.0930	.0000			
40	.0517	.0258			
50	.0141	.0281			
59	.0001	.0028			

**Retirement Rates:** 

Members <u>eligible to retire</u> are assumed to retire in accordance with the following rates:

AGE AT BEGINNING OF YEAR	PROBABILITY OF RETIRING DURING YEAR
55-59	.07
60-61	.08
62-64	.15
65	.34
66-70	.23
71-79	.21
80	1.00

**Disability Rates** 

Disability rates are not used.

**Investment Return** 

7½% per annum, compounded annually.

**Salary Increases** 

4.5% per annum.

Valuation Assets

The assets at cost value adjusted by the past five-year average of the market to cost ratio of assets.

**Administrative Expenses** 

Assumed to be paid from the County's general fund and not from plan assets. However, administrative expenses may from year to year be paid from the fund unless it is determined by the actuary that such payment will impair the actuarial soundness of the fund.

**Actuarial Cost Method** 

The Aggregate Actuarial Cost Method of funding was used to determine costs. Under this method, the valuation assets of the plan are subtracted from the present value of all projected benefits. The result, when divided by the present value of future compensation, gives a percentage normal cost factor which is applied to the estimated 2009 compensation of all members to arrive at the normal cost at the beginning of the plan year.

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#### Schedule K

#### **Summary of Plan Provisions**

1. Effective Date

The effective date of this plan is January 1, 1942.

2. Eligibility for Plan Membership

An employee shall be eligible to become a participant immediately upon becoming an employee.

3. Accrued Benefit

The Retirement Board has authorized benefits equal to a percentage of the members Final Average Salary for each year of service the member has participated in the following Classes:

<u>CLASS</u>	<u>PERCENTAGE</u>	<b>EFFECTIVE</b>
1/120	0.833%	01/01/1942
1/100	1.000%	01/01/1950
1/80	1.250%	01/01/1965
1/60	1.667%	01/01/1972

4. Normal Retirement (Superannuation)

*Eligibility*: Retirement occurs at age 60 or at age 55 if the participant has completed 20 years of service.

**Pension:** A monthly pension equal to (a) and (b), as follows:

- (a) 0.833% of 1/12th of Final "Average" Salary multiplied by years of credited service on the 1/120 Class,
  - 1.000% of 1/12th of Final "Average" Salary multiplied by years of credited service on the 1/100 Class,
  - 1.250% of 1/12th of Final "Average" Salary multiplied by years of credited service on the 1/80 Class,
  - 1.667% of 1/12th of Final "Average" Salary multiplied by years of credited service on the 1/60 Class,

#### **PLUS**

(b) a monthly annuity based on the actuarial equivalent of the member's accumulated contributions with credited interest.

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5. Final "Average" Salary

The average of the member's annual compensation received for the three years which produce the highest such average.

6. Compensation

Pick-up contributions plus remuneration received as a county employee excluding refunds for expenses, contingency and accountable expense allowances and excluding severance payments or payments for unused vacation or sick leave.

7. Early Retirement

Eligibility:

Voluntary: Upon completion of 20 years of service.

Involuntary: Upon completion of 8 years of service.

#### Pension:

(a) a monthly pension equal to the actuarial equivalent of the benefits calculated in 4(a),

#### **PLUS**

(b) a monthly annuity based on the actuarial equivalent of the member's accumulated contributions with credited interest.

8. Vesting

One Hundred Percent (100%) upon completion of five years of credited service. A member who terminates employment after five years of credited service will receive a deferred annuity commencing at age 60 (or at age 55 if the member has at least 20 years of service at termination). The deferred benefit shall be calculated using the normal retirement pension formula but based on credited service, final average salary and accumulated contributions at termination.

If a member terminates employment prior to entitlement to Plan benefits, he will receive his accumulated contributions with interest.

9. Postponed Retirement

A member may work past normal retirement age and continue to accrue pension credits.

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## 10. Disability Retirement

*Eligibility:* Total and permanent disability prior to Superannuation (Normal Retirement) age and after completion of five years of credited service.

**Pension:** A total monthly pension commencing on the last day of the month following disability retirement equal to 25% of the 1/12th of Final Average Salary at time of retirement. Such total monthly pension shall include the monthly disability that is actuarially equivalent to the member's accumulated contributions at retirement.

#### 11. Normal Form of Pension

Benefits are payable in the form of a modified cash refund life annuity, that is for the member's lifetime only, except that disability benefits shall cease upon cessation of disability.

# 12. Optional Retirement Benefits

A member may elect to receive the actuarial equivalent of his retirement benefit as a full cash refund annuity (Option One) or a reduced joint and survivor pension payable for the remainder of his life, with either 100% or 50% of the member's pension continuing after death to the designated beneficiary. A member may also elect to receive, in one payment, the full amount of his accumulated deductions and continue to receive the annuity provided by the county.

#### 13. Death Benefits

- (a) Pre-Retirement. If a member dies after having attained age 60 or having completed ten years of credited service, his beneficiary will receive a lump sum equal to the actuarially determined present value of the benefits calculated in (7a) based on the member's Final Average Salary and credited service at time of death plus the member's accumulated contributions with interest at time of death.
- (b) Post-Retirement. Upon the death of a terminated or retired member, his beneficiary will receive survivor benefits, if any, in accordance with the form under which benefits were being paid to the member. In any event, the total amount of benefits paid to the deceased member and beneficiary must, at least, equal the member's accumulated contributions with interest.

## 14. Employee Contributions

Employees on the 1/120 Class must contribute between 5% and 15% of salary.

Employees on the 1/100 Class must contribute between 6% and 16% of salary.

Employees on the 1/80 Class must contribute between 7% and 17% of salary.

Employees on the 1/60 Class must contribute between 9% and 19% of salary.

# 15. Deposit Administrator

Investment Managers:

C.S. McKee MDL Capital Commonwealth Security

Amerisery/Attilanus Fund

**Boston Company** 

Financial Consultant:

Morrison Fiduciary Advisors

#### 16. Administration

Retirement Board as designated in Act 96 of 1971, the County Pension Law.

### 17. Cost-of-Living

The cost-of-living increase shall be reviewed at least once in every three years by the Retirement Board. The Board has granted cost-of-living increases in the past as follows:

PERCENTAGE CHANGE IN C.P.I.	EFFECTIVE DATE OF INCREASE			
25 %	1/1/1987			
25 %	1/1/1989			
25 %	1/1/1990			
25 %	1/1/1993			
25 %	1/1/1997			
100 %	1/1/2000			

Schedule L
Historical Trend Information

	REVENUES BY SOURCE									
•		Employee Employer Contributions Contributions		Investment Income		Miscellaneous			Total	
1999	\$	3,431,982	\$	0	\$	7,616,767	\$	1,058	\$	11,049,807
2000		3,674,766		0		7,734,917		10,760		11,420,443
2001		3,916,060		0		(274,679)		390,836		4,032,217
2002		4,247,750		1,451,894		(969,434)		6,692		4,736,902
2003		4,478,111		3,325,708		5,259,729		12,459		13,076,007
2004		4,313,641		3,652,159		9,116,367		23,359		17,105,526
2005		4,646,279	1	5,282,136		10,868,306		944,788		31,741,509
2006		4,417,118		2,020,537		10,287,413		183,644		16,908,712
2007		4,673,009		2,113,111		13,165,607		108,286		20,060,013
2008		5,057,431		1,887,756		(2,616,564)		0		4,328,623

EXPENSES BY TYPE								
Fiscal Year Benefits		Benefits	Refunds			Administrative/ Miscellaneous		Total
1999	\$	2,534,386	\$	570,863	\$	484,691	\$	3,589,940
2000		2,737,690		906,973		523,173		4,167,836
2001		2,911,218		718,986		667,813		4,298,017
2002		3,754,457		729,366		464,218		4,948,041
2003		4,028,888		631,848		459,079		5,119,815
2004		4,547,629		1,048,016		490,767		6,086,412
2005		6,291,405		1,535,165		636,412		8,462,982
2006		5,415,047		812,788		716,364		6,944,199
2007		6,085,489		1,012,478		822,822		7,920,789
2008		6,202,485		1,082,591		715,656		8,000,732